In the Drawings:

Please approve the drawing changes as shown in red on the attached marked-up copies of Figs. 1-3. A separate Letter to the Draftsman indicating the same proposed changes are also enclosed.

REMARKS

As a preliminary matter, with respect to the drawings, Applicants have included herewith marked-up copies of Figs. 1-3, with the proposed changes in red. As can be seen from the proposed changes, Applicants have corrected the informalities to which the Examiner has objected. Approval of the proposed drawing changes is respectfully requested.

Claims 1-4, 6-12, and 14-20 stand rejected under 35 U.S.C. 102(b) as being anticipated by Kim, et al. (U.S. 6,493,173). Claims 9-12 and 14-16 have been canceled without prejudice herein, rendering the rejection to these claims now moot. With respect to remaining claims 1-4, 6-8, and 17-20, Applicants respectfully traverse the rejection because the cited reference does not disclose (or suggest) that eccentricity correction data is recorded in consideration of a yaw angle, and at a location different from where user data is written, as in the present invention, as amended.

Independent claims 1 and 20 have been amended herein to clarify that the yaw angle is taken into consideration to record eccentricity correction data. Claims 1 and 20 further recite that the eccentricity correction data is recorded at a location different from a location where user data is written. Similarly, claim 17 has been amended to clarify that the position of the recording and reproducing head is controlled when writing the user data in the recording medium based on the eccentricity data. By taking the yaw angle into account, the ReadHead can read data while the WriteHead remains at its writing position. Kim fails to teach or suggest these clarified features of the present invention.

Kim discloses a correction value 34 is used by a servo control system 40 to position a head 30 over a track 26. (See column 4, lines 29-38). Kim emphasizes, however, that the correction value 34 is for repeatable runout (column 4, line 23), and is therefore unrelated to yaw angle. Furthermore, according to Kim, the repeatable runout information is written in the data area to be used as the correction value. This correction information is rewritten in the data area in order to prevent the servo information from being damaged for subsequent unrestricted modifications. Kim even teaches that plurality of consecutive data may be written in the data area. (See column 4, lines 39-50). Accordingly, Kim is very different from the present invention, which utilizes the yaw angle, and stores the eccentricity correction data at a location different from the user data. With respect to claim 17, Applicants submit that Kim could not control the position of the head while writing the user data to the recording medium without taking into account the yaw angle and the other features specifically recited in the other independent claims. Accordingly, Applicants submit that the Section 102 rejection of independent claims 1, 17, and 20 (as well as their respective dependent claims) has been overcome at least in light of these amendments.

Claims 5 and 13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Takaishi (U.S. 2001/0030828). Claim 13 has been canceled without prejudice herein, rendering the rejection of this claim now moot. With respect to claim 5, Applicants respectfully traverse the rejection for at least the reasons discussed above in traversing the rejection of independent claim 1. Claim 5 depends from independent claim 1, and therefore includes all of the features of the base claim, plus additional features. The Examiner cites Takaishi only for teaching to record eccentricity correction data according to frequency components, but not for taking into account any consideration of the yaw angle.

Reconsideration and withdrawal of the outstanding Section 103 rejection is further appropriate because the present invention would not be obvious from the teachings of Kim, from a combination of Kim with Takaishi, and because the present invention utilizes significant advantages over both prior art references, whether taken alone or in combination. Repeatable runout information in the present invention could be written in a data area, similar to what is disclosed by Kim. Kim, however, requires a significant amount of time to reach a targeted cylinder (seek operation), and then write data at a position on the cylinder in a stable manner, by first reading the repeatable runout data, and then writing the data into a data area. Regular data is thus not typically written in the center of the cylinder because of the yaw angle. And because Kim treats repeatable runout data like regular data, Kim's repeatable runout data would not be written into the center of the cylinder. As described above, the process according to Kim is unnecessarily time consuming.

In contrast, according to the recited features of the present invention, a ReadHead may first be shifted to the center of the cylinder. Repeatable runout data may then be read, and regular data can be written to a medium in such a way that the head stays at the same position. In other words, repeatable runout data can be read and written to a medium in the same time it would normally take to reach the targeted cylinder, without even shifting the head. Accordingly, the present invention significantly simplifies even the process described by Kim, but with greatly enhanced reading and writing performance over the prior art.

The stability and speed advantages of the present invention over the prior art are even more apparent when taking into consideration retry operations. It is known in the art to perform one or more retry operations when data cannot be read the first time. However, when data is written to a medium, an unstable head location may accidentally overwrite or delete data on an adjacent cylinder.

Such erroneously written information cannot be recovered, and in the case of overwritten data, the sectors that are erroneously written over are also prevented from recovery. Therefore, according to conventional systems like Kim, more repeatable runout correction for the writing operation would be required than for the reading operation, which affects system performance. According to the amended clarifications in the present claims negatively though, a more stable and speedy system is presented during the writing of data, which thereby realizes significant advantages over the systems disclosed in the prior art.

For all of the foregoing reasons, Applicants submit that this application, including claims 1-8 and 17-20 is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

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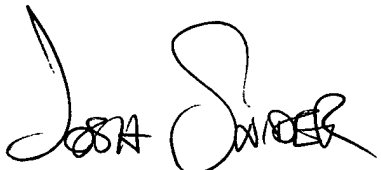
By: 
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FIG.1
PRIOR ART

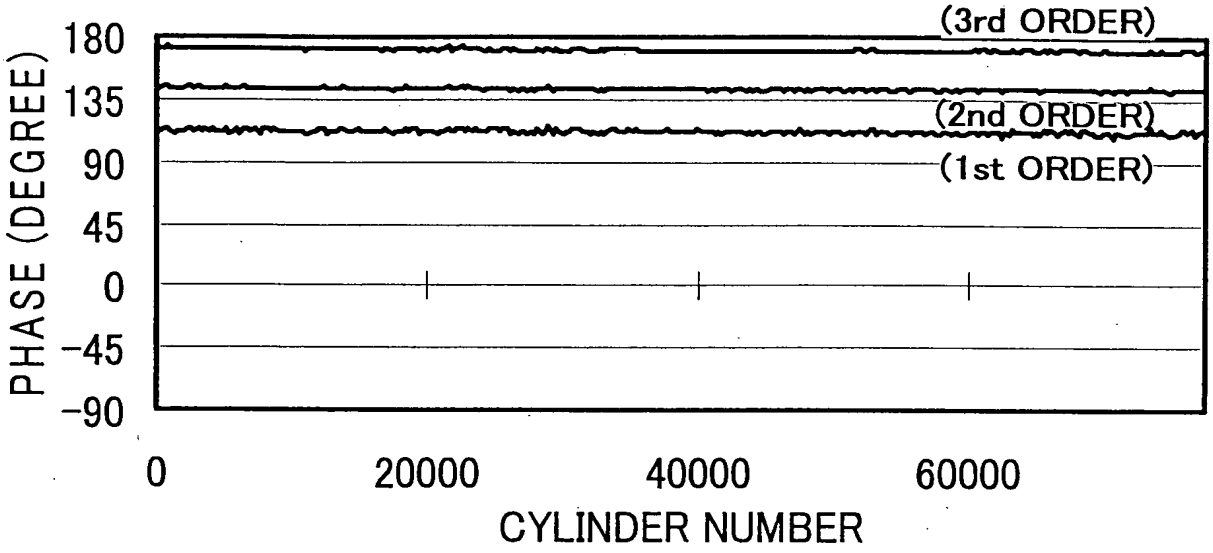

FIG.2
PRIOR ART

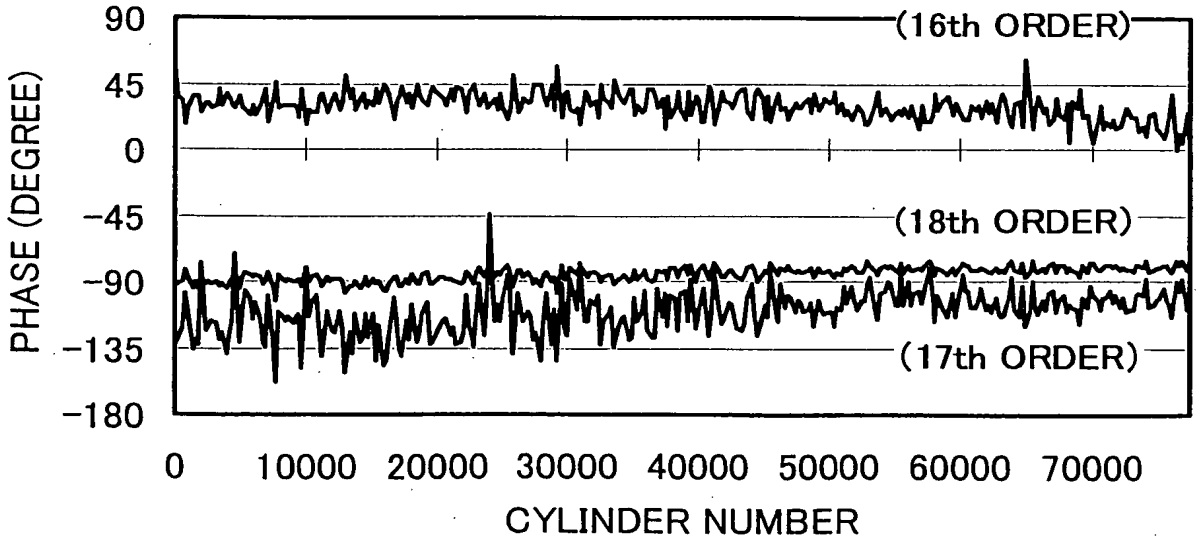

FIG.3
PRIOR ART